

Biological Resiliency Programs

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Wide Area Recovery and Resiliency Program (WARRP)

- **Collaborative program between DHS and Denver Urban Area Security Initiative (UASI)**
 - **Goal:** Develop solutions to reduce the time and resources required to recover wide urban areas, military installations, and other critical infrastructures following a catastrophic chemical, biological, or radiological (CBR) incident.
 - **Stakeholders:** Interagency partners, including federal /state / local / tribal governments, military, private industry and non-profit organizations
- **Building on Interagency Biological Restoration Demonstration (IBRD)**
 - Test and evaluate transportability of IBRD consequence management guidance, tools and solution sets against multiple threat agents within an all-hazards framework
 - Further explore interdependencies between Public Health, DoD and the socio-economic areas
- **Emphasis on Transition to Use**
 - Operationally relevant solutions, developed and demonstrated to meet end-user and owner requirements



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Programmatic Approach

Task	Effort	Capability Target & Objective
1	Front-End System Engineering Study and Gaps Analysis	Body of knowledge for national, state, and local restoration capabilities
2	Wide-Area Recovery Framework	Develop guidance to address civilian & military needs and capabilities for recovery & restoration actions
3	Science and Technology Development	Recovery process methods, procedures, and technology development
4	Workshops, Exercises, and Demonstrations	Coordinate civilian & military community interoperability, and practical application of technology and concepts of operation
5	Transition to Use	



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WARRP at a glance...



People...Products...Outcomes



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Key Stakeholders / Players



Activities & Products



Outcomes

Local / State	State of CO	Denver UASI
	Adams County	Emergency Mgmt
	Boulder County	Environmental Health
	Denver County	Fire
	Jefferson County	Public Health
	Tri-County	Public Safety
	South Metro	Transportation
Region	EPA Region 8	
	FEMA Region 8	
Federal	ASPR	DOE
	CDC	EPA
	DHS	FEMA
Military	Buckley AFB	
	Joint Staff	
	National Guard	
	NORTHCOM	
Private Sector	Brookfield Properties Corp.	
	Colorado 211	
	CO Chapter of ICC	
	CO Emergency Preparedness Partnership	
COVOAD		
Program Support	<u>National Labs</u>	Cubic Applications
	Lawrence Livermore	ECBC
	Pacific Northwest	SPAWAR
	Sandia	

System Study

Strategic & Operational Gaps
Public Health & Medical Gaps
Economic Impact Assessment

Guidance & Frameworks

Denver UASI Recovery Framework
National Template
CBR Technical Reports & Planning Annexes

Workshops

Knowledge Enhancement
Expert Elicitation

Work Groups

Environmental Remediation Operations
Public Health & Medical

Science & Technology

Decision Support
Decontamination
Sampling

Exercises & Demonstrations

Mile High Challenge
S&T Demonstrations

Economic Resilience

Innovative strategies to accelerate economic recovery

Proven Planning Templates

Long-term recovery documents to enhance regional planning capabilities

Interagency Coordination

Enhanced long-term formal coordination among all stakeholders

Public Health Understanding

Improved understanding to address public health strategies and challenges

Science & Technology Solutions

Operationally relevant solutions to support recovery activities

Process Development

Objective regional processes for identifying & planning for CBR incidents

WARRP – Products, Performers, Timelines

Product	Performer	Since Kick-off	2011			2012								
		Feb-Sep 2011	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
System Study	SNL	Workshops	Analysis & Gaps Consensus											
Regional Framework	PNNL	Denver All-Hazards UASI Recovery Framework with CBR Annexes												
National Guidance		National Urban Area Recovery Framework Guidance								Interagency Review Period		Adjudicate Comments	Final Document	
Science & Technology	ECBC, Cubic	Proposals	Development					Development & Demonstrations						
Transition	SPAWAR, Cubic	Transition Agreement Signings	Development Remote Messaging Center Broom PATH/AWARE Regional Recovery Knowledge Products Outdoor Reaerosolization Report Germ-Lysis, Fixatives Reports								Transition			
Workshops	PNNL, Cubic				Mile High Challenge	6-8 Knowledge Enhancement Workshops		Framework Workshop	4-6 Knowledge Enhancement Workshops			Capstone		
Work Groups	Cubic, Fed Leads	Environmental Remediation Operations Work Group (EROWG) Public Health & Medical Work Group (PHMWG)												



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SPORE

- **Scientific Program on Reaerosolization and Exposure (SPORE)**
 - Correlate the relationship between environmental presence and exposure to *B. anthracis*
 - Explore nexus between operations and policy
 - Conduct a series of chamber and outdoor releases to provide empirical data to answer the critical science questions
- **Key Science Questions:**
 - What potential response and recovery actions are impacted/changed based on this new understanding of reaerosolization?
 - Is *B. thuringiensis* an appropriate and accurate simulant for *B. anthracis* reaerosolization?
 - How do environmental, human factors and other external forces impact reaerosolization?
 - How do bio-agent preparations and release mechanisms impact reaerosolization?
 - Can we improve what is known about various air sampling methods based upon reaerosolization?
 - What mechanisms govern outdoor to indoor transport (including vehicles)?
 - What models, plans and operations are necessary to quantify bio-agent reaerosolization (near and long term)?



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